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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
10/043,647	01/10/2002	Ashok Gadgil	WATERHE.016A	6043	
20995	7590 05/08/2003				
KNOBBE MARTENS OLSON & BEAR LLP			EXAMINER		
2040 MAIN S					
	FOURTEENTH FLOOR KALIVODA, CHRISTOPHER IRVINE, CA 92614		KISTOPHEK M		
			ART UNIT	PAPER NUMBER	
•			2881	•	
			DATE MAILED: 05/08/2003		

Please find below and/or attached an Office communication concerning this application or proceeding.

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		Application No.	<u> </u>	
		Application No.	Applicant(s)	
	Offic Acti n Summary	10/043,647	GADGIL ET AL.	
	ome Aut II dummary	Examiner	Art Unit	
: 	The MAIL INC DATE AND THE	Christopher M. Kalivoda	2881	
Period fo	The MAILING DATE of this communication appropriate the second section appropriate the second section and the second section appropriate the second section and the second section appropriate the second section appropriate the second section appropriate the second section section appropriate the second section secti	ppears on the cover sheet wi	th the correspondence address	
I HE II - Exter after - If the - If NO - Failui - Any n	ORTENED STATUTORY PERIOD FOR REP MAILING DATE OF THIS COMMUNICATION nsions of time may be available under the provisions of 37 CFR 1 SIX (6) MONTHS from the mailing date of this communication. period for reply specified above is less than thirty (30) days, a reperiod for reply is specified above, the maximum statutory period reto reply within the set or extended period for reply will, by statute ply received by the Office later than three months after the mailing patent term adjustment. See 37 CFR 1.704(b).	136(a). In no event, however, may a n ply within the statutory minimum of thirt d will apply and will expire SIX (6) MON the cause the application to become AB	eply be timely filed y (30) days will be considered timely. THS from the mailing also of this communic	ation.
1)	Responsive to communication(s) filed on	·		
2a) <u></u> □	This action is FINAL . 2b)⊠ T	his action is non-final.		
3) Disposition	Since this application is in condition for allow closed in accordance with the practice under on of Claims	vance except for formal mat r <i>Ex parte Quayle</i> , 1935 C.E	ters, prosecution as to the mer D. 11, 453 O.G. 213.	its is
4)⊠	Claim(s) 1-16 is/are pending in the application	on.		
4	4a) Of the above claim(s) is/are withdra	awn from consideration.		
	Claim(s) is/are allowed.			
6)⊠	Claim(s) <u>1-16</u> is/are rejected.			
	Claim(s) is/are objected to.			
8)[Claim(s) are subject to restriction and/o	or election requirement.		
	on Papers	,		
9)⊠ T	he specification is objected to by the Examine	er.		
10)⊠ T	he drawing(s) filed on <u>08 May 2002</u> is/are: a)	☑ accepted or b)☐ objected	to by the Examiner.	
	Applicant may not request that any objection to the	ne drawing(s) be held in abeya	nce. See 37 CFR 1.85(a).	
11)∐ T	he proposed drawing correction filed on	_ is: a)□ approved b)□ di	sapproved by the Examiner.	
	If approved, corrected drawings are required in re			
12)∐ T	he oath or declaration is objected to by the Ex	xaminer.		
Priority ur	nder 35 U.S.C. §§ 119 and 120		•	
13) 🗌 🛚 A	Acknowledgment is made of a claim for foreig	n priority under 35 U.S.C. §	119(a)-(d) or (f).	
a)[All b) Some * c) None of:			
1	1. Certified copies of the priority document	ts have been received.		
2	2. Certified copies of the priority document	ts have been received in Ap	plication No	
	Copies of the certified copies of the prio application from the International Buse the attached detailed Office action for a list	rity documents have been rureau (PCT Rule 17.2(a)).	eceived in this National Stage	
	knowledgment is made of a claim for domesti			ation).
a) (15) <u> </u>	☐ The translation of the foreign language procknowledgment is made of a claim for domest	ovisional application has bee	en received.	
Attachment(s		_		
2) Notice (3) Informa	of References Cited (PTO-892) of Draftsperson's Patent Drawing Review (PTO-948) ation Disclosure Statement(s) (PTO-1449) Paper No(s) 6	5) Notice of Inf	immary (PTO-413) Paper No(s) ormal Patent Application (PTO-152)	
i. Patent and Trad FO-326 (Rev.		ction Summary	Part of Paper No. 8	

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DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities: The specification refers the top/upper reflector using reference sign "SI" in paragraph 0008, line 3 but also refers to the same reflector using reference sign "51" in paragraph 13, line 2. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 8, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Gadgil, et al. U.S. Patent 5,780,860. Regarding claim 1, Gadgil, et al. teach an ultraviolet water disinfector comprising:

- a. a feed water delivery system (see column 19, lines 1-15);
- b. an inlet chamber housing at least a portion of the feed water delivery system (see column 19, line 16-17 and figure 1, ref signs 21 and 31);
- c. a baffle wall downstream of the feed water delivery system, the baffle wall having a plurality of spaced perforations (see column 19, lines 19-21 and column 22, lines 5-9 and figure 1, ref sign 37);

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d. an air suspended UV lamp (see column 21, lines 14-19 and figure 1, ref sign

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53); and

e. a treatment chamber beneath the UV lamp downstream of the baffle wall,

wherein water is driven by gravity at a flow rate of 8 liters per minute or less (see

column 12, line 33-34).

Regarding claim 8, Gadgil, et al. teaches the UV system as described in claim 1

above. Since the inventors anticipate a system with a max throughput of 15 L/min, they

also anticipate a range of 4 L/min or less (see column 12, line 33-34).

Regarding claim 9, Gadgil, et al. teaches the UV system as described in claim 1

above. Since the inventors anticipate a system with a max throughput of 15 L/min, they

also anticipate a range of 1-3 L/min or less (see column 12, line 33-34).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

Patentability shall not be negatived by the manner in which the invention was made.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gadgil, et al. U.S. Patent 5,780,860 in view of Kool, et al. U.S. Patent 6,533,930. Regarding claim 2, Gadgil, et al. teaches the limitations of claim 1 as described above.

However, the reference is silent with respect to adapting the feed water delivery system to connect to a household tap.

Kool, et al. teaches the use of water treatment stations for use in the home or office. In addition, water can be either fed directly from a faucet or routed through the station prior to being dispensed from the faucet (see column 1, lines 22-29).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify the invention of Gadgil, et al. to adapt the water delivery system to be able to connect to a household tap as the source of water.

The motivation for such an improvement would be to remove contaminants found in tap water (see column 1, line 10-13).

Claims 3 and 10 –16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gadgil, et al. U.S. Patent 5,780,860. Regarding claim 3, Gadgil, et al. teaches the limitations of claim 1 as described above. In addition, Gadgil, et al. describes the use of an outer shell adapted to collect water that overflows (see column 19, lines 45-55).

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However, the reference is silent with respect to a notch in the inlet chamber adapted to allow excess water to overflow.

Gadgil, et al describes the use of notches (evacuation cutouts) on walls for water overflow (see column 12, line 34-39).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify the inlet chamber to include notches adapted to allow excess water to overflow.

The motivation for such an improvement would be to prevent excess water from flooding the internal workings (see column 12, lines 39-42).

Regarding claim 10, Gadgil, et al. teaches the limitations of claim 1 as described above.

However, the reference is silent with respect to the disinfector having a length of about 48 cm or less, a width of about 19.5 cm or less, and a height of about 15.75 cm or less.

It is well known in the art to scale the size of components (See MPEP 2144.04; In re Rinehart, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976)).

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Therefore, it would have been obvious to one skilled in the art at the time the invention was made to scale the disinfector to a smaller size.

The motivation for making the disinfector smaller or larger would be to be able to install the system in various locations and have the flexibility to accommodate different sizes.

Regarding claim 11, Gadgil, et al. teaches the limitations of claim 1 as described above.

However, the reference is silent with respect to the disinfector having a length of about 40 cm or less, a width of about 16.5 cm or less, and a height of about 13.125 cm or less.

It is well known in the art to scale the size of components (See MPEP 2144.04; In re Rinehart, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976)).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to scale the disinfector to a smaller size.

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The motivation for making the disinfector smaller or larger would be to be able to install the system in various locations and have the flexibility to accommodate different sizes.

Regarding claim 12, Gadgil, et al. teaches the limitations of claim 1 as described above.

However, the reference is silent with respect to the disinfector having a length within a range of about 35.2 – 28.8 cm, a width within a range of about 14.3 – 11.7 cm, and a height within a range of about 11.55 – 9.45 cm.

It is well known in the art to scale the size of components (See MPEP 2144.04; In re Rinehart, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976)).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to scale the disinfector to a smaller size.

The motivation for making the disinfector smaller or larger would be to be able to install the system in various locations and have the flexibility to accommodate different sizes.

Regarding claim 13, Gadgil, et al. teach an ultraviolet water disinfector comprising:

- a. a feed water delivery system (see column 19, lines 1-15);
- b. an inlet chamber housing at least a portion of the feed water delivery system (see column 19, line 16-17 and figure 1, ref signs 21 and 31);
- c. a baffle wall downstream of the feed water delivery system, the baffle wall having a plurality of spaced perforations (see column 19, lines 19-21 and column 22, lines 5-9 and figure 1, ref sign 37);
- d. a treatment chamber beneath the UV lamp downstream of the baffle wall, wherein water is driven by gravity at a flow rate of 8 liters per minute or less (see column 12, line 33-34).

However, the reference is silent with respect to the specific use of a UV lamp using 20 Watts of input power or less.

Gadgil, et al. indicates that very low energy lamps can be used (see column 3, lines 45-48). It is well known in the art to optimize within prior art conditions or perform routine experimentation (See MPEP 2144.04; In re Aller, 220 F.2d 454, 105 USPQ 233,235).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to use a UV lamp that uses less than about 20 Watts of input power.

The motivation for using low power UV lamps would be reduce operating costs and increase bulb longevity.

Regarding claim 14, Gadgil, et al. teaches the UV system as described in claim 13 above. Since the inventors anticipate a system with a max throughput of 15 L/min, they also anticipate a rate of 8 L/min or less (see column 12, line 33-34).

Regarding claim 15, Gadgil, et al. teaches the UV system as described in claim 13 above. In addition, the inventors describe the use of a low-pressure mercury lamp (see column 24, line 58-61).

Regarding claim 16, Gadgil, et al. teaches the UV system as described in claim 13 above. However, the reference is silent with respect to the disinfector having a length of about 40 cm or less, a width of about 16.25 cm or less, and a height of about 13.125 cm or less.

It is well known in the art to scale the size of components (See MPEP 2144.04; In re Rinehart, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976)).

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Therefore, it would have been obvious to one skilled in the art at the time the invention was made to scale the disinfector to a smaller size.

The motivation for making the disinfector smaller or larger would be to be able to install the system in various locations and have the flexibility to accommodate different sizes.

Claims 4 - 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gadgil, et al. U.S. Patent 5,780,860 in view of Cryptosporidium Inactivation By Low Pressure UV In a Water Disinfection Device by Drescher, Greene, and Gadgil (referred to as Drescher, et al.). Regarding claim 4, Gadgil, et al. teaches the limitations of claim 1 as described above.

However, the reference is silent with respect to narrowband UV radiation.

Drescher, et al. teaches the use of narrowband UV in a water purification system (see page 1 abstract).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to incorporate the use of narrowband UV radiation in the invention of Gadgil, et al.

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The motivation for the use of narrowband UV radiation would be to treat the water possibly containing Cryptosporidium parvum as well as most bacteria and viruses (see page 8, second paragraph).

Regarding claim 5, Gadgil, et al. in view of Drescher, et al. teaches the limitations of claim 4 above.

However, the references are silent with respect to specific lamp power used.

Gadgil, et al. indicates that very low energy lamps can be used (see column 3, lines 45-48). It is well known in the art to optimize within prior art conditions or perform routine experimentation (See MPEP 2144.04; In re Aller, 220 F.2d 454, 105 USPQ 233,235).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to use a UV lamp that uses less than about 25 Watts of input power.

The motivation for using low power UV lamps would be reduce operating costs and increase bulb longevity.

Regarding claim 6, Gadgil, et al. in view of Drescher, et al. teaches the limitations of claim 5 above.

However, the references are silent with respect to specific lamp power used.

Gadgil, et al. indicates that very low energy lamps can be used (see column 3. lines 45-48). It is well known in the art to optimize within prior art conditions or perform routine experimentation (See MPEP 2144.04; In re Aller, 220 F.2d 454, 105 USPQ 233,235).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to use a UV lamp that uses less than about 20 Watts of input power.

The motivation for using low power UV lamps would be reduce operating costs and increase bulb longevity.

Regarding claim 7, Gadgil, et al. in view of Drescher, et al. teaches the limitations of claim 6 above.

However, the references are silent with respect to specific lamp power used.

Gadgil, et al. indicates that very low energy lamps can be used (see column 3, lines 45-48). It is well known in the art to optimize within prior art conditions or perform routine experimentation (See MPEP 2144.04; In re Aller, 220 F.2d 454, 105 USPQ 233,235).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to use a UV lamp that uses about 8-15 Watts of input power.

The motivation for using low power UV lamps would be reduce operating costs and increase bulb longevity.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher M. Kalivoda whose telephone number is (703)-305-7443. The examiner can normally be reached on Monday - Friday (8:30 - 5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R. Lee can be reached on (703)-308-4116. The fax phone numbers for the organization where this application or proceeding is assigned are (703)-872-9318 for regular communications and (703)-872-9319 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-308-0956.

cmk May 2, 2003

SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800